

CLAIMS

1. A method for allocating information transfer capacity in a mobile communication system, the mobile communication system comprising a base station and a mobile station, the method comprising:

5 forming a connection between the base station and the mobile station,

 requesting for allocation of information transfer capacity to the mobile station; and

 connecting the mobile station to a service site formed by a remote station of the base station, the service site being located inside the cell formed by the base station, the service site using the same radio interface as the cell, the service site providing the mobile station with higher information transfer capacity than the cell, the remote station being controlled by the base station, and the traffic of the remote station being routed via the base station; and

15 transferring information by using the service site.

2. A method as claimed in claim 1, further comprising detecting in the mobile station, before requesting for allocation of information transfer capacity to the mobile station, a need to allocate information transfer capacity to the mobile station.

20 3. A method as claimed in claim 1, further comprising connecting the mobile station to the service site by using a different physical radio channel in the service site than that used in the cell.

 4. A method as claimed in claim 1, further comprising connecting the mobile station to the service site based on an intentional act of the user of the mobile station to use the service site.

25 5. A method as claimed in claim 1, further comprising decreasing, the transmit power of the mobile station to a predetermined level after the mobile station has been connected to the service site.

 6. A method as claimed in claim 1, further comprising controlling the transmit power of the remote station according to the information transfer capacity requirement of the mobile station after the mobile station has been connected to the service site.

30 7. A method as claimed in claim 1, further comprising disconnecting the mobile station from the service site after the information has been transferred.

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8. A method as claimed in claim 1, further comprising determining the location of the mobile station before the mobile station has been connected to the service site.

5 9. A method as claimed in claim 1, further comprising connecting the mobile station to the service site whenever the mobile station is located within the operating range of the service site.

10 10. A method as claimed in claim 1, further comprising disconnecting the mobile station from the service site whenever the mobile station is located outside the operation range of the service site.

11. A method as claimed in claim 1, further comprising providing the mobile station with accessibility information on the service site.

12. A method as claimed in claim 1, further comprising providing the mobile station with guidance information to the service site.

15 13. A method as claimed in claim 1, further comprising indicating to the user, in the mobile station, the location information on the service site.

14. A method as claimed in claim 1, further comprising informing the user about the location of the service site with visual signs.

15. A method as claimed in claim 1, wherein the operating range of the service site depends on the free path of the mobile station.

20 16. A method as claimed in claim 1, wherein the operating range of the service site is confined to half a meter from the remote station.

17. A method as claimed in claim 1, wherein the operating range of the service site is confined to a line-of-sight range from the remote station.

25 18. A mobile communication system comprising:
a base station for providing a mobile station with radio transmission and reception;

a mobile station connected to the base station for providing a user of the mobile station with access to the mobile communication system; and

30 a base station control unit for controlling the radio connection between the base station and the mobile station;

wherein the base station comprises a main station for forming a cell;

wherein the base station comprises a remote station connected to the main station for providing the mobile station with radio transmission and reception;

35 wherein the remote station is configured to use the same radio interface as the main station; and

wherein the remote station is configured to form a service site inside the cell, the service site providing the mobile station with higher information transfer capacity than the cell.

19. A mobile communication system as claimed in claim 18, wherein
5 the base station control unit is configured to detect a need to allocate information transfer capacity to the mobile station.

20. A mobile communication system as claimed in claim 18, wherein the mobile station is configured to detect a need for allocating information transfer capacity to the mobile station.

10 21. A mobile communication system as claimed in claim 18, wherein the base station is configured to use a different physical radio channel in the service site than that used in the cell.

22. A mobile communication system as claimed in claim 18, wherein the base station control unit is configured to decrease the transmit power of the
15 mobile station connected to the remote station to a predetermined level.

23. A mobile communication system as claimed in claim 18, wherein the base station control unit is configured to control the transmit power of the remote station according to the information transfer capacity requirement of the mobile station connected to the remote station.

20 24. A mobile communication system as claimed in claim 18, wherein the base station control unit is configured to determine the location of the mobile station.

25 25. A mobile communication system as claimed in claim 18, wherein the base station is configured to connect the mobile station to the remote station as the mobile station is located within the operating range of the remote station.

26. A mobile communication system as claimed in claim 18, wherein the base station is configured to the disconnect the mobile station from the remote station according to the information transfer capacity requirement of the
30 mobile station.

27. A mobile communication system as claimed in claim 18, wherein the base station is configured to the disconnect the mobile station from the remote station whenever the mobile station is located outside the operation range of the service site.

28. A mobile communication system as claimed in claim 18, wherein the base station control unit is configured to provide the mobile station with accessibility information of the service site.

29. A mobile communication system as claimed in claim 18, wherein
5 the base station control unit is configured to provide the user of the mobile station with guidance information to the service site.

30. A mobile communication system as claimed in claim 18, wherein the mobile station is configured to indicate the location information of the service site to the user.

10 31. A mobile communication system as claimed in claim 18, wherein the mobile communication system further comprises means for informing the user about the location of the service site.

32. A mobile communication system as claimed in claim 18, wherein the base station is configured to confine the operating range of the service site
15 according to the free path of the mobile station.

33. A mobile communication system as claimed in claim 18, wherein the base station is configured to confine the operating range of the service site to half a meter from the remote station.

34. A mobile communication system as claimed in claim 18, wherein
20 the base station is configured to confine the operating range of the service site to a line-of-sight range from the remote station.

35. A mobile communication system as claimed in claim 18, wherein the remote station is configured to confine the transmit power to 10 nW.

36. A mobile communication system as claimed in claim 18, wherein
25 the main station comprises means for transmitting traffic from the remote station and for receiving traffic at the remote station.

37. A mobile communication system as claimed in claim 18, wherein the main station comprises means for controlling the remote station.

38. A mobile communication system as claimed in claim 18, wherein
30 the base station comprises means for transferring signals between the main station and the remote station.

39. A mobile communication system as claimed in claim 18, wherein the remote station comprises means for radio transmission and reception.

40. A mobile communication system as claimed in claim 18, wherein
35 the remote station comprises means for signal processing.

41. A mobile communication system as claimed in claim 18, wherein the remote station comprises means for storing information.

42. A mobile communication system as claimed in claim 18, wherein the remote station comprises means for beam forming.

5 43. A mobile communication system as claimed in claim 18, wherein the remote station comprises a control unit for controlling local functions of the remote station.

10 44. A mobile communication system as claimed in claim 18, wherein the remote station comprises leaky cables for forming an elongated radiation pattern.